

Math Assessed Indicators

High School

Assessed Indicator	Description
1.2.K3	▲ names, uses, and describes these properties with the real number system and demonstrates their meaning including the use of concrete objects (2.4.K1a) (\$): a. commutative ($a + b = b + a$ and $ab = ba$), associative [$a + (b + c) = (a + b) + c$ and $a(bc) = (ab)c$], distributive [$a(b + c) = ab + ac$], and substitution properties (if $a = 2$, then $3a = 3 \times 2 = 6$); b. identity properties for addition and multiplication and inverse properties of addition and multiplication (additive identity: $a + 0 = a$, multiplicative identity: $a \cdot 1 = a$, additive inverse: $+5 + -5 = 0$, multiplicative inverse: $8 \times 1/8 = 1$); c. symmetric property of equality (if $a = b$, then $b = a$); d. addition and multiplication properties of equality (if $a = b$, then $a + c = b + c$ and if $a = b$, then $ac = bc$) and inequalities (if $a > b$, then $a + c > b + c$ and if $a > b$, and $c > 0$ then $ac > bc$); e. zero product property (if $ab = 0$, then $a = 0$ and/or $b = 0$).
1.3.A1	▲ adjusts original rational number estimate of a real-world problem based on additional information (a frame of reference) (2.4.A1a) (\$),
1.4.A1	generates and/or solves multi-step real-world problems with real numbers and algebraic expressions using computational procedures (addition, subtraction, multiplication, division, roots, and powers excluding logarithms), and mathematical concepts with (\$): a. ▲ applications from business, chemistry, and physics that involve addition, subtraction, multiplication, division, squares, and square roots when the formulae are given as part of the problem and variables are defined (2.4.A1a) (\$), b. ▲ volume and surface area given the measurement formulas of rectangular solids and cylinders (2.4.A1f), d. ▲ ■ application of percents (2.4.A1a),
2.2.A2	represents and/or solves real-world problems with (2.4.A1c) (\$): a. ▲N linear equations and inequalities both analytically and graphically, e.g., tickets for a school play are \$5 for adults and \$3 for students. You need to sell at least \$65 in tickets. Give an inequality and a graph that represents this situation and three possible solutions.
2.2.K3	Solves: a. ▲N systems of linear equations with two unknowns using integer coefficients and constants;
2.3.A2	▲ ■ interprets the meaning of the x- and y- intercepts, slope, and/or points on and off the line on a graph in the context of a real-world situation (2.4.A1e) (\$)
2.3.K6	▲ recognizes how changes in the constant and/or slope within a linear function changes the appearance of a graph (2.4.K1f) (\$).
3.1.A1	solves real-world problems by (2.4.A1a): b. ▲ ■ applying the Pythagorean Theorem,
3.3.A1	▲ analyzes the impact of transformations on the perimeter and area of circles, rectangles, and triangles and volume of rectangular prisms and cylinders (2.4.A1f),
3.4.K4	▲ finds and explains the relationship between the slopes of parallel and perpendicular lines (2.4.K1f),
3.4.K6	▲ recognizes the equation of a line and transforms the equation into slope-intercept form in order to identify the slope and y-intercept and uses this information to graph the line (2.4.K1f).
4.1.K3	▲ explains the relationship between probability and odds and computes one given the other (2.4.K1a,k).
4.2.A1	▲ uses data analysis (mean, median, mode, range, quartile, interquartile range) in real-world problems with rational number data sets to compare and contrast two sets

	of data, to make accurate inferences and predictions, to analyze decisions, and to develop convincing arguments from these data displays (2.4.A1i) (\$): a. ■ frequency tables and line plots; b. bar, line, and circle graphs; c. Venn diagrams or other pictorial displays; d. charts and tables; e. stem-and-leaf plots (single and double); f. scatter plots g. box-and-whiskers plots; h. histograms.
4.2.K4	▲ explains the effects of outliers on the measures of central tendency (mean, median, mode) and range and interquartile range of a real number data set (2.4.K1a).
4.2.K5	▲ approximates a line of best fit given a scatter plot and makes predictions using the graph or the equation of that line (2.4.K1k).